SAFETY FIRST

The Scheldemusch Pusher to be Made in this Country : Interesting Flying Characteristics : "Tricycle" Undercarriage

ALTHOUGH the machine itself is extremely interesting as an example of the result of a very serious attempt to produce an aircraft which can be flown with safety by almost any pilot—or even a non-pilot—the most interesting feature of the Dutch Scheldemusch is its undercarriage. From time to time the three-wheeled undercarriage has made its appearance, the most recent examples being those of the various U.S. Bureau of Air Commerce machines, the Cowey-Eugster and that to be fitted to the Douglas D.C.4. In each case the reasons and effects are slightly different, but in the first two they are primarily those of simplifying the landing business for the novice pilot.

The idea of making contact with the ground necessarily at an angle of maximum lift has always appeared to be somewhat illogical, particularly where low stalling speeds are concerned, and any machine which has been designed for the absolute novice should necessarily be arranged so that a good many liberties may be taken with it near the ground. In the case of the Scheldemusch, or Scheldt Sparrow, the centre of gravity is ahead of the main undercarriage, and the elevator control has been limited so that it is virtually impossible to make an incorrect landing unless the machine is brought in at an unreasonably high speed.

If a semi-three-point landing is attempted the machine merely pivots on to its nose as soon as the ground has been touched, while if the machine is glided slowly into the ground it continues in a horizontal direction and does not "balloon" up again. The Scheldemusch undercarriage has a vertical movement of nearly six inches and is capable of taking a considerable vertical stress; its front wheel is steerable, so that the machine is as manœuvrable on the ground as one could possibly wish.

Basically, the Scheldemusch is a very normal pusher biplane with a pronounced dihedral, H.P. slots, differential ailerons, and a boom tail. The single-seater fuselage—or, as it used to be termed, nacelle—is of welded steel tube construction, while the wings are two-spar wooden structures. In these days of low-powered machines it may be considered as powerful for a single-seater, the engine being a flat-twin Praga B. of 40 h.p. For some reason or other the noise of the engine is more pronounced in the cabin than it should be, and from the pilot's point of view this is the only criticism I have to make. The view in the forward hemisphere is extremely good, since, in level attitude, the top of the scuttle is very well below the horizon.

The Scheldemusch about to adopt one of the unconventional attitudes which it can assume quite near the ground with equanimity. The Handley Page slots are just beginning to open. (*Flight* photograph.)

The Take-off

With the centre of gravity so far forward it might be expected that the take-off would be interesting. In fact, it is not possible to leave the ground until the speed is quite high, and the machine then climbs very strongly indeed. To the pilot it first appears as if nothing in the world will make it leave *terra firma*, and then, quite suddenly, with the stick held only a little aft of neutral, the nose lifts and the machine leaves the ground in quite a steep climb.

The fact that there is no fuselage means that the Schelde-

(*Continued after centre page illustrations.*)

On all threes : The pusher on the ground, showing the 40 h.p. Praga-flat twin engine. (*Flight* photograph.)